UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/597,650	03/13/2007	Tetsushi Kasahara	P30417	4373

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EXAMINER
BONZO, BRYCE P

ART UNIT	PAPER NUMBER
2113	

NOTIFICATION DATE	DELIVERY MODE
12/10/2008	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

gbpatent@gbpatent.com
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Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>16 September 2008</u>.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-7</u> is/are pending in the application.

   4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-7</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

   * See the attached detailed Office action for a list of the certified copies not received.

FINAL REJECTION

Status of the Claims

Claims 1-7 are rejected under 35 USC §103.

Rejections under 35 USC §103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over

McGinnis (United States Patent No. 7,177,989 B1).

As per the claim 1, McGinnis discloses:

1. A memory which data can be written to and read from by a data processor,

comprising:

a host interface that transmits and receives a command and data to and from the

data processor (items 30,21,26);

a memory that stores data (item 13);

a controller that controls the operation of the memory card (items 11/12);

and a storage section that stores specified management information (inherent as the retry number used later must be stored somewhere).,

wherein the management information includes retry setting information which specifies whether a retry function is executed or not when an error occurs during an operation of reading data to the nonvolatile memory (column 2, lines 58 through column 3, line 15), and

the controller refers to the retry setting information in the data reading operation, and controls the data writing operation so as to disable the retry function in the event of an error in the data writing operation, when the retry setting information indicates disabling of the retry function or to enable the retry function in the event of an error in the data reading operation, when the retry setting information indicates enabling of the retry function (column 2, lines 19-38).

McGinnis does not explicitly disclose:

the memory implemented as a card.

Official Notice is given that it is notoriously well known to implement many forms of memory as cards. The small size and energy requirements of solid state memory make the mounting of memory on cards a well known implementation. The cards protect memory, allow fixed bus paths and enforce a measure of interoperability to the memory market through form factors. Thus it would have been obvious to one of ordinary skill in the art of computer processing to implement the memory of McGinnis on a card, thus conforming thus invention to the industry manufacturing norms.

McGinnis does not explicitly disclose:

wherein the memory is non-volatile.

McGinnis never limits the application of his memory system. The system is nominally to be used in a fault tolerant server environment, and presumably as the data passes through a memory controller, a system memory. Official Notice is given that it is notoriously well known to implement vital system memory operation in the non-volatile memory for transaction based systems. This is done as often transaction are often only stored in system memory or a cache awaiting a disk. Thus if the event of a power failure, non-volatile memory is the only safeguard for this data. Thus it would have been obvious to one of ordinary skill in the art of computer processing to implement the memory of McGinnis as a non-volatile memory, thus allowing the system to preserve the data through a power interruption.

McGinnis does not explicitly disclose:

the operation is a write, as opposed to a read.

Official Notice is given that reading and writing data from a memory are intimately linked, and that it notoriously well incorporate read error handling into the write error handling systems. The most common example of this is the write-verify operation, where data is written and then read back to ensure the system properly stored the data. It is commonly used in mission critical systems from RAM to disk storage. As the either the write or the read may have failed in such a system, both processes use error

detection techniques. Importantly, as the result of a write is impossible to determine

without a proper read, the two operations are tightly intertwined, as such any secured

write must be viewed a write in combination of a read. Thus it would have been obvious

to one of ordinary skill in the art at the time of invention to implement the well known

practice of incorporating reading methodology into a write methodology into the system

of McGinnis, producing a more secured write system.

2. The memory card according to claim 1, wherein the management information

includes characteristic information specific to the memory card, and the controller

transmits the characteristic information to the data processor according to the request

from the data processor (column 2, lines 19-38).

3. The memory card according to claim 2, wherein the characteristic information

includes information regarding maximum required time for data writing to the memory

card (column 3, lines 36-43).

As per claim 4, McGinnis does not explicitly disclose:

wherein the characteristic information includes information regarding a frequency

of the retry process occurring in the memory card.

Official Notice is given that it is notoriously well known to monitor and store retry

frequencies in memories. Memories are susceptible to two main classes of errors,

transient and sustained. Transient errors are generally not due to device failure, but

other fluctuations in the system (for instance radiation) while sustained errors generally indicate a device failure which will require removal. Intermittent errors generally are resolved after a few tries, while sustained errors are recognizable by a high retry count. thus it would have been obvious to eon of ordinary skill in the art of computer processing to store retry frequency data in the system of McGinnis, thus allowing the user to determine the nature of the failure and take additional corrective steps in the case of failure of a memory device.

Claims 5-7 are the data processor, control method, and setting method of claim 1 and are rejected on the same grounds.

Response to Applicant's Arguments

First, Applicant has challenged the use of Official Notice on four separate instances. Applicant is provided with US Patent 7,360,713 showing that it is known to integrate a control portion and NVRAM onto a card memory. US Patent 5,828,535 is provided in support of the assertion that it is well known to track and apply corrective action based on write and reads interchangeably, and further track the frequency of retries in memory system.

Second, Applicant twice argues that certain operations are conditional. First for conditional retry execution and second for conditional disabling. The Examiner points out the claims are written in a manner which does not require their interpretation as a

conditional decision block. The claims are written such that code which performs only one of Applicants desired two actions qualifies as prior art.

Third, Applicant argues "writing of specific management information into a specific configured memory..." The Examiner points out, that while this may appear in the disclosure, it not what is actually claimed. the only writing being disclosed, the generic writing alluded to within the preamble.

Fourth, Applicant argues that the prior art reference does not disclose information characteristic of a card being accessed. The prior art does disclose the configuration data characteristic to the memory of the prior art. As the Examiner provided a rationale and obvious statement for motivating the combination within a card system, the management information by extension becomes specific to the combination which now includes the card.

Finally, Applicant argues the prior art does not know the maximum required time for data writing. Applicant points to the lower portion of the cited patent, as support. The cited portion discloses that in a real world system many things can and will go wrong and lists a number of them. Applicant has ignored the first portion of the citation which describes that maximum time is known. Applicant is attempting to discredit the prior art simply on the basis prior acknowledges that system will exist in the real world as opposed to a theoretical patent disclosure.

Final Disposition

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bryce P. Bonzo whose telephone number is (571)272-3655. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Beausoliel can be reached on (571)272-3645. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Bryce P Bonzo/
Primary Examiner, Art Unit 2113